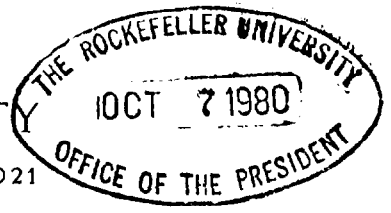




THE ROCKEFELLER UNIVERSITY

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E. Friedheim

A. Kappas

10 - 3 1980

ANTIMONY

Kap: Ernst reference to a
micro history of Sb:

McCallum,
Pres Roy Soc Med
70: 756-63 (1977)

11/2/81 Jan.

Dr. Joshua Lederberg
President
Rockefeller University
New York

Dear Joshua,

Thank you for the 'observations on antimony'.
Indeed, a wild romance of acceptance and rejection. The
author quotes the 'Triumph of antimony'. The reverse: when
the Faculty of Paris ordered an addition to the hippocratic
oath: " -- and I swear that I will never prescribe antimony --".

The ups and downs of Sb were due to the indiscriminate
application to all and every condition, reflecting the
archetypal alchemistic notion of the panacea, the cure-all,
the philosophers stone, the savior, ridding the world of
all evils. (this tendency is not lost: vitamine C from
cold to cancer).

Ionized Sb reacts unspecifically with a host of cationic and
anionic components of proteins and carbohydrates. It became
more selective, and the first cure for schistosomiasis,
when chelated to tartaric acid. But, Sb-tartrate is sufficiently
dissociated under physiological conditions to cause a multi-
tude of side effects. The ideal antimonial should be a
chelate, undissociated while circulating in the organism,
and releasing Sb only in contact with the target - e.g. schisto-
somes - provided with a receptor competing successfully for
the Sb of the chelate. Along these lines I developed
dimercaptosuccinic acid and the corresponding Sb-chelate men-
tioned by the author (stibocaptate, astiban)..

Similar considerations guide the present project on arsenic.
The enclosed table indicates that filarial worms take up
As from a chelate to the tune of 100 times input. This
observation is the ground for the present search for As-
receptors.

Sincerely,

[Handwritten signature]